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09/822,841	04/02/2001	Martin L. Lenhardt	063223/0121	8595

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EXAMINER

QADERI, RUNA S

ART UNIT PAPER-NUMBER

3737

DATE MAILED: 08/15/2003

6

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/822,841

Applicant(s)

LENHARDT, MARTIN L.

Examiner

Runa S. Qaderi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.  
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).  
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 5. 6) ☐ Other:

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## DETAILED ACTION

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 10 is rejected under 35 U.S.C. 102(b) as being clearly anticipated by Westermann (Pat# 5,325,872).

Claims 1, 3, 10-12 are rejected under 35 U.S.C. 102(e) as being anticipated by Lippa et al. (Pat # 6,377,693)

Lippa et al. teaches a system and method of masking and suppressing tinnitus using an sensory stimulus in the auditory range modulated with a second signal in the ultrasound frequency range. The final signal is administered to the tinnitus-suffering patient either through an applicator in the form of a vibrational transducer or headphones, column 2.

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The teaching to a sensory stimulus in the auditory range (100 to 20,000 Hz.) administered via headphones satisfies the limitations of applicants' claims 1, 3, 10, and 11, column 2 lines 51-57. Further the sensory stimulus is inputting to a signal generator that outputs the sound as sine waves, square waves, white noise, or clicks, column 2 lines 4-7. The teaching to clicks is interpreted as providing for a pulsing sound or noise as taught by applicants' claim 12. Clicks are an on/off signal as is a pulsing signal.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 4, 5, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lippa et al.

The Lippa et al. reference teaches a system and method of masking and suppressing tinnitus by administering an audio signal modulated by an ultrasound signal. The audio signal further comprises of an auditory frequency range (i.e. 100 to 20,000 Hz). The patent also teaches an adjustment of volume and frequency of the ultrasound signals to provide for optimum efficiency in masking tinnitus.

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The patent does not explicitly recite the specific amplitude level of the upper audio frequency, the centering at the at least one upper frequency, and determining the optimum upper audio frequency.

It would have been obvious to a person of ordinary skill in the art to at the time the invention was made to have chosen any appropriate level of upper audio frequency so along as the function of masking the tinnitus is satisfied as taught by the Lippa et al. reference. It would have been obvious to a person of ordinary skill in the art to center on a specific frequency within a range because the audio signal of Lippa et al. is not limited to a specific frequency. Instead it is taught to be within a frequency range. The function of varying the frequency of the audio signal thereby providing for a more efficient masking therapy is satisfied with a teaching to provide for a range of audio frequencies as taught by Lippa et al. It would have been inherently obvious to a person of ordinary skill in the art at the time the invention was made to provide optimum audio frequency because it is an expansion to the adjustment of volume and frequency of ultrasound signals as taught by Lippa et al.

Claims 14-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Viirre et al. (WO 02/062264 A2).

Viirre et al. teaches a method of masking and suppressing tinnitus by providing an auditory stimuli via headphones to a tinnitus patient. The auditory stimuli are generated by a function generator and can comprise a signal or plurality of mixed tones. The mixed tone is interpreted as the music and multiplied with the at least one tone as

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taught by the applicant. The final signal is administered to the patient and the patient reaction to the signal is monitored feedback to provide for a more efficient and customized therapy procedure. One customized tinnitus treatment signal is determined the patient can thus download and store the signal to an electronic sound player for later use. The teachings to a digital electronic music payer encompass the applicants' limitations of claims 15 and 17.

The limitation to an analog player is obvious to one of ordinary skill in the art at the time the invention was made because it allows for equivalent functionality.

The Viirre et al. reference does not recite a specific frequency range of as taught by the applicant. It would have been obvious to a person of ordinary skill in the art to provide any appropriate audio frequency range to satisfy the efficiency of the tinnitus procedure. The customization of the tinnitus-masking signal further enhances providing for a more efficient therapy procedure.

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lippa et al. (Pat# 6,377,693) in view of Viirre et al. (WO 02/062264).

Lippa et al. teaches system and method of masking and suppressing tinnitus. A first signal in the audio frequency is modulated with a second signal in the ultrasound frequency range. The mixed signal is administered to a patient via either vibration or headphones.

Regarding claim 6, the input port, first gain stage, and first gain value are interpreted as the noise signal generator, modulator, and amplifier, respectively, as taught by the Lippa patent.

The Lippa et al. patent does teach providing for music as the audio signal and does not explicitly recite input signal as one signal or a mixture of signals.

Viirre et al. teaches a system and method of masking and suppressing tinnitus by customizing a musical sound for the specific patient. The music can comprise a signal sound or mixing of multiple sounds. Once customized tinnitus treatment signal is determined the patient can thus download and store the signal to an electronic sound player for later and repeated use.

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have further comprised the first audio signal of Lippa et al as a musical sound because music has been known to help people relax and meditate. The use of music as the audio signal of the Lippa et al. patent provides for a pleasant sound as taught by Viirre et al. The step of providing music as a signal sound or a mixing of a plurality of sounds is obvious in providing for a customized therapy signal to more efficiently mask and suppress tinnitus.

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

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Thiede et al. (Pub# US 2002/0090100 A1) teaching an ear level device for masking tinnitus by synthesizing music.

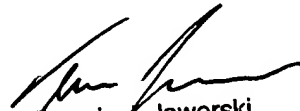
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Runa S. Qaderi whose telephone number is (703) 308-8155. The examiner can normally be reached on Mon-Fri 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dennis W. Ruhl can be reached at (703) 308-2262. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-3590 for regular communications and (703) 746-7289 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0858.

*RSQ*

RSQ  
August 8, 2003

  
Francis J. Jaworski  
Primary Examiner